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Underground Waters

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In the law of real property, two maxims have long served to define and limit ownership in land. Land is defined to be the soil of the earth, including everything standing upon or buried beneath its surface; and property in it is said to extend upward and downward without limit. In this theoretical idea of indefinite extension from the heavens above to the very center of the earth below, is embraced the first of the maxims: "Cujus est solum ejus usque ad caelum, et ad infernos".

In this maxim we find a broad and comprehensive definition of the right of property, securing to the proprietor of real estate a free and absolute ownership, a perfect and unrestricted right of enjoyment. He may dig down indefinitely into the earth, and revel in its mysteries: he may build upward as far as he dare to aspire. In these directions he has apparently nothing to desire; but in others a difficulty confronts him. He finds himself surrounded completely by other landed proprietors whose ownership is as full and absolute as his own. He realizes with alarm that the air he must breathe, the water he must drink, the light that he enjoys, come to him across the lands of his neighbors, and may at any moment be interfered with so as to render the enjoyment of his property impossible.

In view of the difficulties in this direction, another maxim came into existence: "Sic utere tuo ut alienum non laedas". Its obvious limitation upon the other created a conflicting border land in the law of real property, constantly presenting new difficulties, the settlement of which is made none the easier by many dubious and unsatisfactory precedents.

Among the cases in which litigants have based their claims of right respectively upon these two maxims, are those involving rights of water. The courts have seen fit to draw a sharp line of distinction between underground waters and those that flow upon the surface in well defined channels. It is well and uniformly settled that the ownership of land gives only the right to a reasonable use of the water flowing through it in surface channels, and no permanent right of property in the water itself. In other words, each riparian proprietor of land over which streams of water flow in well defined surface channels, has a clear legal right, resulting from his ownership of the soil, to have the water of such streams continue in its natural and accustomed course, subject only to a reasonable use of such water by the upper riparian owners. And the same principles are quite generally conceded to apply to subterranean waters

if they flow in defined and known channels.

In this rule of ordinary and reasonable use, the courts have drawn, between the conflicting rights and duties secured and imposed by the two maxims, an admirable dividing line, possessing sufficient elasticity to work complete justice in practically all cases, and still not lacking in the rigidity essential to a law. The rule is well stated by Mr. Justice Cooley, in Dumont V. Kellogg (29 Mich. 423), thus: "As between different proprietors on the same stream, the right of each qualifies the other, and the question always is, not merely whether the lower proprietor suffers damage by the use of the water above him, nor whether the quantity flowing on is diminished by the use, but whether, under all the circumstances of the case, the use of the water by one is reasonable and consistent with a corresp on-dent enjoyment of the right by the other." In determining the reasonableness of the use, the courts have found it convenient to make a further distinction between so called ordinary and extraordinary uses. Water to supply man's natural wants is an ordinary use, and to supply his artificial wants, an extraordinary use. The real difference pointed out by the authorities between the two classes of uses, is that water may be used for ordinary purposes without regard to the effects of such use in case of a deficiency to those

below on the stream, while in reference to the extraordinary uses, the effect upon those below must always be considered in determining its reasonableness. According to the great weight of common law authority, where the supply of water is very small for these natural or ordinary uses, the upper riparian owner may if necessary consume all the water of the stream to supply his natural wants, but not for any other purpose.

These principles, so admirably adapted and universally accepted by the courts to govern conflicting rights in surface streams and such subterranean currents as are known and defined, have almost universally declared inapplicable to subterranean waters percolating through the soil or flowing in unknown and undefined currents. The practical uncertainties and difficulty of proof caused the courts to shrink from attempting to formulate and apply a rule of law respecting underground waters which should serve similarly as a dividing line between the conflicting rights and duties of property owners. They early declared that percolating waters were part of the soil in which they were found and not in the eye of the law distinct from the earth; and left each owner to dig down and appropriate all the water he

might find beneath the surface to his own purpose, at his free will and pleasure, without regard to the effect upon his neighbor. Utterly disregarding with respect to these questions the duty imposed upon each property owner by our s second maxim, the first was applied, alone and unrestricted, in all its harshness and injustice; and so the law has been settled by a long and almost uninterrupted line of cases. Chief Justice Chapman, in the leading case of Wilson v New Bedford (108 Mass. 265), states the rule as follows: "The percolating water belongs to the owner of the land as much as the land itself, or the rocks and stones in it. Therefor he may dig a well and make it very large, and draw up the water by machinery or otherwise in such quantities as to supply aqueducts for a lagge neighborhood. He may thus take the water which would otherwise pass by natural percolation into his neighbor's land, and dwaw of f the water which may come by natural percolation from his neighbor's land".

All the decisions of the American courts and of England are in virtual harmony with the rule as stated, excepting only the single state of New Hamshire. The courts of that state have declared a more liberal rule, based purely

upon principle, and ignoring utterly the doctrine so well established by existing precedents. Following the analogy of the law applied to surface streams as closely as the nature of the two situations admits, they have used the maxim,"Sic utere"&c, to qualify the rights of land owners in regard to percolating waters, and drawn between the correspondent rights and duties resulting a dividing line of reasonable use of one's property in view of the correspondent rights of others. By this rule, as in the case of water courses, the rights of the respective property owners are considered correlatively, and what is such reasonable exercise of one's right or privilege is to be determined under all the circumstances of each particular case, from its necessities and in view of the corresponding rights of others. Here we have a doctrine broadly reaching the many injustices which the other, narrow, strict and arbitrary, must work. The principal, if not the only excuse suggested for the general preference shown the former rule, is the difficulty of applying the latter, by reason of the supposed impossibility of knowing or proving with reasonable certainty the sources of supply hidden beneath the surface. This may be seen by examining the opinions of the learned judges in some of t he earlier leading cases, with a view

to ascertaining the motives of expediency by which they were actuated.

The earliest case in England was Acton v Blundell (12 M.& W.336) decided in 1843. The rule applied was imported from the Civil Law, and stated by Justice Maule as follows: "If a man dig a well in his own field and thereby drains his neighbor's, he may do so unless he does it maliciously". And Chief Justice Tindall, in passing upon the case, said: "If the man who sinks the well in his own land can acquire by that act an absolute right to the water that collects in it, he has the power of preventing his neighbor from making any use of the spring in his own soil which shall interfere with the enjoyment of the well. He has the power still further of debarring the owner of the land in which the spring is first found, or through which it is transmitted, from draining his land for the proper cultivation of the soil. - - - - The advantage on the one side and the detriment on the other may bear no proportion. The well may be sunk to supply a cottage, or a drinking place for cattle, whilst the ownwr of adjoining land may be prevented from mining metals and minerals of inestim able value". His opinion concludes as follows: "We think this case, for the reasons

given, is not to be governed by the law which applies to rivers and flowing streams, but that it rather falls within the principle that gives the owner all that lies beneath the surface: that the land immediately below is his property, whether it is solid rock,or porous ground, or venous earth, or part soil, part water: that the person who owns the soil may dig therein and apply all that there is found to his own purpose at his free will and pleasure; and that if in the exercise of such right, he intercepts and drains off the water collected from underground springs in his neighbor's well, this inconvenience to his neighbor falls within the description of "damnum absque injuria", which can not be the ground for action".

In the early American case of Roath v Driscoll (20 Conn. 533) , Judge Ellsworth justifies the position taken by the decision in the following language: "Each owner has an equal and complete right to the use of his own land and to the water which is in it. Water combined with earth or passing through it, by percolation, or by filtration, or chemical attraction,has no distinct character of ownership from the earth itself, not more than the metallic oxide of which the earth is composed . Water, whether moving or motionless in the earth, is not, in the eye of the law, dis-

tinct from the earth. The laws of its existenc- and progres while there, are not uniform, and cannot be known or regulated. It rises to great heights, and moves collaterally, by influences beyond our apprehension. These influences are so secret, changeable and uncontrollable, we cannot subject them to the regulations, nor bui ld upon them a system of rules, as has been done with stream upon the surface. - - - - - - Were it otherwise, one man by sinking a well, though comparatively unimportant, might prevent the sinking of other wells, and the improvementof neighborhoods, by draining marshes &c, and even the opening of mines of metal or coal, as the water might not percolate with the same freeness and abundance as before. Beside, no man is bound to know that his neighbor's well is supplied by water percolating in his own soil; and he ought not therefore to be held to lose his rights by such continued enjoyment. He can not know that the first well requires any other than the natural and common use of water under the surface; nor by what means it appears in one place or the other; nor which of the persons who first or afterwards opens the earth, encroaches upon the right of the other".

In t he leading Pennsylvania case of Wheatley v Baugh(25Pa. St. 528), the prevailing opinion argues in the same strain: "When the filtrations are gathered together in

sufficient volume to have an appreciable value, and to flow in a clearly defined channel, it is generailly possible to see it and to avoid diverting it, without serious detriment to the owner of the land through which it flows. But percolations spread in every direction through the earth, and it is impossible to avoid disturbing them without relinquishing the necessary enjoyment of the land. Accordingly, the law has never gone so far as to recognize in one man a right to convert another's farm to his own use for the purpose of a filter. Such a claim, if sustained, would amount t o a total abrogation of the right of property. No man could dig a cellar or a well or build a house on his own land, bee cause these operations necessarily interrupt the filtration through the earth. Nor could he cut down the forest and clear his land for the purpose of husbandry, because the evaporation which would be caused by exposing the earth to the sun and air, would inevitably diminish, to some extent, the supply of water which would otherwise filter through it. He could not even turn a furrow for agricultural purposes, because this would partially produce t he same result. Even if this right were admitted to exist, the difficulty in ascertaining the fact of its violation, as well as the extent of it, would be insurmountable."

It seems hardly necessary to refer to the utter absurdity of such arguments as that the adoption of any othe rule wouldamount to a total abro gation of the right of property, and prevent one man from excavating with due care to secure the precious minerals and metals in the soil, because he might thereby cause some slight injury to his nei ghbor's water supply. To say that a doctrine so manifestly fair and just as that stated by t he New Nampshire courts, having at its basis good sense and reason and looking to the proper protection of the rights of property in view of all the circumstances and necessities of each particular case would hinder one from properly pursuing the tillage of the soil or draining it in a suitable manner; or restrain him from levelling forests and converting them into arable lands because of the resulting greatly increased evaporation of the moisture in the soil, are statements that it sounds incredible to impute to the learned judges who spoke them. The arg ument against the feasibility of adopting a rule so difficult of application because of the shadowy uncertainties of its subject matter, alone remains. Something must be offered to explain the "mysterious influences and agencies, secret, changeable, and uncontrollable"that"govern and regulate the existenc- and progress" of water percolating in the soil, a substance so easy to understand and ready to

obey apparently, until it gets out of our sight beneath the surface of the earth. We have left then only to invoke the aid of science t o inject into an enlightened bench a few of first elements of physics and structural geology, and the theory of the accepted doctrine is apparently exploded.

That the strict and arbitrary rule as laid down by these early decisions has been found unsatisfactory, in many cases tot ally inconsistent with well grounded principles of right and worse than useless as a guide to the courts in solving the difficult situations presented, is shown by the subtle and purely fictional distinctions that have been resorted to, under pressure of necessity, to qualify it, and that by its most persistent supporters.

For example, take the New York case of Pixley v Clark (35 N.Y. 520). The injury complained of was the saturation of a piece of land by percolations forced through the natural banks of the river, from the increased pressure caused by defendant's dam raising the level of the stream. The court upheld the action on a very nice distinction first suggested in the English case of Grand Junction Canal Co. v Shugar (L.R.6 Ch. 487), between interrupting percolating water on its way to a spring or stream, and abstracting it by percolation after having reached there. The question arose more directly in Village of Delhi v Youmans (45 N.Y.

362), where the proposition was stated by Judge Peckham, thus: "If the action of the defendant took the water away from the springs after it had reached there, after it had become part of an open running stream, then the action would lie". The same distinction is followed in many other states. It is interesting to note that the courts, from the necessity of preserving their better rule as to surface streams, having made this arbitrary rule in view of the insurmountable difficulties of proof of percolating waters, now make a an exception to it, based upon a distinction that requires proof not only of the general course of the percolations, but of their direction as well. Take the case of a perennial spring serving as an outlet to the surface for the waters percolating through the gravelly stratum of a large section of the surrounding country. An adjoining land owner sinks a large well through the same stratumand as a natural consequence the volume of the spring is greatly reduced. But who shall whether that diminution of quantity was caused by an interruption of the percolations that were the sources of the spring; or an abstraction of the water of the spring itself nearly as fast as they reached it; or can we properly say that either one or the other is the fact separately and not the two together? Or, having proven

caerfully the general course and direction of the percolations, and having determined whether such enormous and unreasonable well may or may not be maintained, according as its projector has taken care to locate it relatively to the direction of the current, on one side of the spring or the other, where now is the excuse for not adjudicating the case in accordance with the doctrine of reasonable use and in view of the correspondent rights of the respective property owners, since the percolations have become as well known and defined by reasonable inference as the law requires of the subterranean currents to which that doctrine does apply.

Three comparatively recent cases in Massachusetts in the same direction are entertaining as illustrations of the elastic possibilities involved in distinguishing carefully the case in point from such precedents as seem, to the layman at least, somewhat similar.

In the first, Bailey v Woburn (126 Mass. 416), the town had taken lands on the border of a pond and constructed on it a water gallery from which to supply the inhabitants with water. Direct connection between gallery and pond was made by pipes, but it was found unnecessary to use them by reason of the filtration. It was held that the

right to use the pipes existed nevertheless, and that this was taking the water within the meaning of the statute authorizing the act.

In Aetna Mills v Waltham (126 Mass. 422), the facts were precisely the same except that there was no direct connection with the stream. An artificial embankment on the border formed one side of the water gallery and part of the water supply filtered through it from the river. This was also held t aking the water from the river under the statute.

In the third case, Aetna Mills v Brookline (127 Mass. 69), the town constructed its water gallery on land conveyed to it by quitclaim.deed near the river from which it was authorized to take water under statute. But finding that the water percolating into the gallery was sufficient, they made no connection with the river, directly or indirectly, and defended squarely on the right to the percolations in or coming to their own land, admitting that some of it came from the river. The opinion discusses the general rule as stated in Wilson v New Bedford (Supra) and mentions the exception, or rather distinction, made by Grand Junction Canal Co. v Shugar (Supra), of taking the water of a defined stream by percolation, but apparently reluctantto come

out squarely in favor of such exception until compelled to, they avoid the question by resorting to an exaggeration of their ground of decision in the preceding cases, and hold simply that taking by percolation is sufficient within the meaning of the statute.

An earlier Massachusetts case is cited by the text writers as a leading authority for the rather startling proposition, in view of the established law as to percolating waters in that state, that irrespective of the question whether the div ersion is by intercepting the percolations that form the spr ing or not, a rialroad company is liable in damages if an excavation made for its road drains a well on land adjacent but not crossed by its line. The learned judge, after stating in his opinion that the rule as to adjacent property owners is exactly opposite, decides the case, justly but not logically, upon a distinction between ownership and the special usufructuary right of the rialroad. The owner of the property through which the road passed might clearly have made the excavation, or any one else to whom he chose to give the right to make it, without liability being incurred to the adjacent owner by either. But the law that governs a monied railroad corporation is apparently a different thing altoget her.

It will be noted that the cases present the question of the ownership of percolating waters in two distinct aspects: the one involving the question of the respective rights to the use of the water itself, while the other deals with the right to use the property, the question of right to the water in it arising only incidentally as the particulardirection in which the act of the defendant upon his own land, lawful but unreasonable, causes injury to the plaintiff. The real reason for reaching a solution of the problem,so little in accord with fundamental justice, as the generally accepted rule is, seems to me to lie wholly in this latter class of cases, all that the courts have said about the practical uncertainties of its subject matter notwithstanding. There exists no real reason in theory or practice why the respective rights of adjacent land owners in the waters percolating through the soil, should not be adjudicated according to a rule as well adapted to secure the best and fullest enjoyment of landed property as that which governs surface streams. The water itself is no less valuable, and has to be resorted to as the source of supply far oftener, both by reasonof the scarcity of natural streams and the poor quality of the water found in them. Large sections of country are supplied

wholly by wells taking their source in the filtrations of the soil, without which the land itself would be uninhabitable and worthless. But to say that the use of percolating waters is a right which each property owner must exercise reasonably and in view of the wants and necessities of his neighbor, is for the courts to recognize in it such a right of property as they cannot consistently totally disregard in the second class of cases, where the diversion of the filtrations is caused by a lawful, though unreasonable, use of one's property, but without any intention or desire, either to deprive his neighbor of the water, or secure it for himself.

At all times the courts have been reluctant to abridge by any limitation whatsoever the absolute freedom of the individual to use and enjoy his own property as he sees fit, so long as he acts lawfully. So steadfastly have some resisted any encroachment upon this field, as to deny recognition even to the exception made by the Civil Law, of acts instigated by malice, maintaining that the exercise of a legal right cannot, in any case, be affected by the motive which controls it. But granting that the courts should be conservative in yielding, the position is nevertheless one that cannot be strictly maintained. That they have frequently been compelled to depart from it actually,

though perhaps not openly, is seen in the application of the maxim, "Sic utere"&c, to cases of water courses, highways, alleged nuisances in regard to air, and by noises, and numerous other familiar instances. A rule that gives to one the right to use his property as he chooses absolutely, does not insure him the fullest possible enjoyment of it, since it is to such a degree dependent on the conduct of surrounding property owners, and the same privilege must be extended to all.

In the particular direction we are considering, the refined distinctions made whenever possible to alleviate the harshness of the strict rule, and the illogical and inconsistent decisions that have resulted, indicate clearly the tendency of the law under the pressure of necessity. Two comparatively recent decisions are interesting to note in this connection.

In Kinnard v Standard Oil Co. (7 L.R.A. 451), a Kentucky case decided in 1890, the leakage of oil, stored in large quantities on defendant's land, damaged plaintiff's spring by corrupting the percolations that supplied it. It was squarely held that, although one may appropriate all the underground water in his soil, he still has not the right to contaminate it, so that when it reaches his neighbors' land it will be unfit for use by either man or beast.

The wisdom, the absolute necessity, of reaching that conclusion in such cases is obvious, but no less so is the logical inconsistency of the two propositions. In commenting upon the very respectable line of authorities that have taken a similar stand, Judge Cooley, in Upjohn v Richland Township (46 Mich. 542), very aptly says: "But if withdrawing the water from one's well by an excavation on adjoining lands will give no right of action, it is difficult to understand how corrupting its waters by a proper use of the adjoining premises can be actionable, when there is no actual intent to injure and no negligence. The one act destroys the well, and the other does no more; the injury is the same in kind and degree in the two cases.

Perhaps a still better illustration of the insurmountable difficulties that must, sooner or later, confront all courts in their attempted adherence to so unreasonable a rule, is the case of Collins v Chartiers Valley Gas Co.(131 Pa.St. 143). The defendant Gas Company drilled a well upon their land, in consequence of which salt water found in a lower stratum, arose and mixed with the fresh water of an upper stratum, and ruined all the wells of the surrounding section of country. The well was drilled in the ordinary manner, and in all respects suitable for the purpose for which it was intended, but the contamination of

the fresh water by the salt could have been forseen by reasonable inference, and prevented at a slight additional expense. The equities of the case so clearly necessitated a modification of the established rule in the interest of the public good, that the courts were constrained to sustain the contention of the plaintiffs, and chose the ground of negligence as the basis for their departure. The decision is well considered and will serve, presumably, as a precedent for the redress of numerous injuries that before were unjustly styled,"damnum absque injuria".

Negligence implies the lack of reasonable care, or care proportional to the risk under all the circumstances of each particularcase; and the circumstances that serve in these cases as the standard of care to be exercised, are simply the wants and necessities of the surrounding land owners. In regard then to our more difficult class of cases, we find the courts of Pennsylvania and New Hampshire in exact harmony by virtue of rules differently stated, but precisely the same in effect: that where one excavates upon or otherwise uses his land, but not for the purpose of collecting the filtrations for himself, he must act, in regard to them, not only lawfully but without negligence; or, in

other words, in a manner that under all the circumstances of the particular case is reasonable, in view of the wants and necessities of his neighbors. But , bound by precedents that they hesitate wholly to overthrow, the Pennsylvania courts still adhere to the strict rule in the other simpler and no less equitable class of cases, where the excavation is for the express purpose of collecting the filtrations: to which it had probably never been applied but for the the difficulties involved in the analagous line of cases in respect to which they have now departed from it. As the law of Pennsylvania now stands, apparently one who sinks a shaft to reach valuable minerals in the soil, and thereby injures the neighboring wells, when he might reasonably have avoided so doing, is liable; while if the same injury is caused by the sinking of an immense well for the express purpose of collecting the filtrations, no matter how useless or unreasonable it may be, it is wholly without redress.

In the opinion of the case just discussed, Mr. Justice Mitchell, in commenting upon the fact that negligence, or care proportional to the risk, presupposes knowledge, more or less perfect, of the conditions involved, finds such knowledge in the practical information gained by sinking wells almost without number throughout the state

during recent years, and says with a frankness that is at least refreshing: "If this is the state of knowledge at the present day, - - - - then, clearly, it would be a violation of the living spirit of the law not to recognize the change, and apply the settled and immutable principles of right to the altered conditions of fact". Granting that the earlier judges were actuated by the most praiseworthy motives of expediency, and built as best they could amid the difficulties by which they were confronted, are we justified in suffering in our midst a crumbling creation of ancient law, from beneath which advanced science has removed the last bit of foundation, to fall, piece by piece, upon the innofensive victims of its injustice, until it has wrought its own destruction?